

**REDUCING INTERFERENCE BETWEEN DIFFERENT COMMUNICATION SYSTEMS
SHARING A COMMON WIRELESS TRANSMISSION MEDIUM**

ABSTRACT OF THE DISCLOSURE

5 In one embodiment, a first wireless communication system conforms to the IEEE 802.15.3 standard and a second wireless communication system conforms to the IEEE 802.11 standard, where the two systems share a common wireless transmission medium. A combined node functions as both an IEEE 802.15.3 piconet controller and an IEEE 802.11 access point. The combined node transmits IEEE 10 802.11 control/management frames to inform other IEEE 802.11 nodes about the beginning and end of IEEE 802.11 contention free periods (CFPs), each of which purposely spans an IEEE 802.15.3 CFP and the following superframe beacon. As such, IEEE 802.15.3 nodes have unfettered access to the common wireless transmission medium during IEEE 802.15.3 CFPs, while allowing access by IEEE 802.11 nodes to the medium during IEEE 802.15.3 contention access periods, thereby avoiding destructive interference between IEEE 802.15.3 and IEEE 802.11 communications. Other embodiments are not necessarily 15 limited to these particular wireless LAN standards.